



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,366	10/03/2003	Gregg D. Wilensky	07844-617001	4008
21876	7590	12/11/2007		
FISH & RICHARDSON P.C. P.O. Box 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER SMITH, JEFFREY S	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/678,366	Applicant(s) WILENSKY, GREGG D.	
	Examiner Jeffrey S. Smith	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The amendment filed 9/11/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "a first automatically determined neighborhood" and also "a second automatically determined neighborhood."

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the phrases "a first automatically determined neighborhood" and "a second automatically determined neighborhood" are missing from the disclosure as originally filed. Evidence that these terms are not found in the application as filed comes from the fact that the meanings of "a first automatically determined

neighborhood" and also "a second automatically determined neighborhood" are missing from the specification. Also missing are discussions of what feature of the neighborhood is automatically determined. Is the size automatically determined, is the shape automatically determined, is the location automatically determined, is the neighborhood automatically determined from some other feature, or from all of these features? The meanings of these terms used in this claim, such as what teachings in the prior art would be covered by the particular limitations and terms in this claim, and which definitions would define the particular claim terms are missing from the disclosure as filed. This is particularly evident where these terms are not used per se in the specification, and the disclosure lacks written description and enablement support for these specific claim elements. Claim 25 has the same problems.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 25-42 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 25 recites a software product tangibly embodied in a tangible computer readable medium. Page 18 of the application states that this includes a propagated signal. Therefore, this claim is non-statutory. One way for applicant to indicate that these claims do not include a propagated signal is to delete the propagated signal from

the specification. Claims 26-42 also can be software products embodied in a propagated signal, and are also non-statutory.

Also, beginning the claim with the phrase "software product" implies that the software by itself is being claimed, because the phrase "embodied in a tangible computer readable medium" is only in the preamble and is not given patentable weight. If applicant amends the claim to recite "a computer readable medium storing a computer program of instructions which, when executed by a computer processing apparatus, cause the apparatus to perform a method comprising" and deletes the reference to a propagated signal from the specification, the claim would be statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-43 and 48 are rejected under 35 U.S.C. 103 as being anticipated by U.S. Patent Number 6,728,421 issued to Kokemohr ("Kokemohr") in view of "The enhancement of radiotherapy verification images by an automated edge detection technique" by Konrad Leszczynski et al., published in Med. Phys. 19 (3), May/June 1992, pp. 611-621 ("Leszczynski").

For claims 1 and 25, Kokemohr discloses determining a first tone value for a first location within the image based upon attributes of pixels within a first neighborhood

surrounding the location, the first tone value specifying a local weight, determining a second tone value, and adjusting the image at the location using first and second tone adjustments according to local weights (see col. 8 lines 5-14 and 40-48).

Leszczynski discloses a first automatically determined neighborhood and a second automatically determined neighborhood (see page 612 column 2 which discusses adaptive histogram equalization (AHE) by Pizer et al. and see page 614 column 1 which discusses interpolated adaptive histogram equalization. The AHE methods divide an image into neighborhoods, determine a tone value for each of the neighborhoods, and adjust a value of a location of the image using the tone values. Leszczynski adds to these AHE methods by only using neighborhoods that are part of the interior of a feature of an image as discussed beginning on page 619 column 2, which is selective adaptive histogram equalization. In other words, the method "automatically determines" neighborhoods within the interior, determines tone values for the automatically determined neighborhoods, and adjusts an image at the location using the determined tone values.)

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kokemohr to automatically determine neighborhoods for the benefits of reproducing field edges and avoiding over-enhancement of background pixels as taught by Leszczynski in the first paragraph of column 1 of page 614.

For claims 2 and 26, the tone value is determined based upon a neighborhood intensity (see column 8 line 27).

For claims 3 and 27, the value of the local attribute depends on luminosity (see col. 8 line 27).

For claims 4 and 28, the value depends on a maximum color value (see col. 8 line 27).

For claims 5 and 29 the value is a weighted average of luminosity and maximum color (see for example col. 13 lines 53-59).

For claims 6 and 30, the neighborhood intensity is determined by averaging pixels (see for example eq. 3 where the weights are equal).

For claims 7 and 31, the Gaussian weights are discussed in col. 14 lines 60-67.

For claims 8 and 32, the difference weights are discussed beginning at col. 8 line 58.

For claims 9 and 33, the user input is discussed beginning with the title.

For claims 10 and 34, the shape can be defined by the user as discussed for example in col. 17 lines 37-40 and as shown in Fig. 4.

For claims 11 and 35, the first neighborhood and the second neighborhood are identical when the first tone value is for color and the second tone value is for luminosity, see for example col. 8 line 42.

For claims 12 and 36, a graphics object is identified, for example, as shown by element 32 in Fig. 4.

For claims 13 and 37, the identified graphics object includes lines, such as the apples shown in Fig. 4.

For claims 14 and 38, additional tone values are determined as shown for example in Fig. 5.

For claims 15 and 39, the additional tone value is determined based on first and second tone values as discussed with respect to the mixing function at col. 8 line 40.

For claims 16 and 40, the user input specifying size of the neighborhood is shown in the "area" section of Fig. 5.

For claims 17 and 41, the user input for strength is shown in Fig. 5.

For claims 18 and 42, negative symmetry is shown by the inversion function of col. 10 line 59.

For claim 43, the digital camera ipso facto has a CCD device (col 19 lines 20-25).

For claim 48, the digital camera is a portable device.

For claim 19, the local adjustment tool is shown in Fig. 5.

For claims 20 and 21, the image capturing device includes a digital camera, as discussed in col. 19 line 24.

For claims 22 and 23, the display device is shown in Fig. 4.

For claim 24, the user interface to set a value is shown in Fig. 5.

Claims 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokemohr and Leszczynski as applied to claims 20 and 23 above, and further in view of U.S. Patent No. 7,121,469 issued to Dorai et al. ("Dorai").

For claims 44 and 45, Kokemohr and Leszczynski do not explicitly state that the adjustment tool provides feedback to the digital camera. However, Dorai discloses in figure 1 and column 4 line 57 through column 5 line 27 that it is well known in the digital

Art Unit: 2624

camera art to include an image processing algorithm in the digital camera to adjust image features such as color and luminance. Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention to use the adjustment tool to provide feedback to the digital camera for the benefit of adjusting image features as taught by Dorai.

For claim 46, Kokemohr does not explicitly state that the digital camera is located in a PDA, phone, or both. However, Dorai in figure 1 discloses that it is well known in the digital camera art to include a camera in a PDA and a phone.

For claim 47, Kokemohr does not explicitly state that the adjustment tool image processing software is located in a remote server. However, Dorai in column 4 line 57 through column 5 line 27 discloses image processing software that could be located either on a client camera or on a remote server that is accessible over the internet.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS
December 3, 2007



JINGGE WU
SUPERVISORY PATENT EXAMINER